

81

Notice of Allowability

Application No.

10/688,017

Examiner

Khanh B. Duong

Applicant(s)

PARK ET AL.

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed October 28, 2005.
2. ☒ The allowed claim(s) is/are 8-31.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 9/22/05 & 10/28/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Amendment

This office action is in response to the amendment filed October 28, 2005.

Accordingly, claim 14 was amended, and new claims 29-31 were added.

Currently, claims 8-31 are pending.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on September 22 and October 28, 2005 have been considered by the examiner.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the Specification:

Please replace the title as follows: --METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE USING SELECTIVE EPITAXIAL SILICON--

Allowable Subject Matter

Claims 8-31 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record, taken alone or in combination, fairly discloses all the limitations as claimed.

Re claim 8, none of the prior art of record discloses the following limitations in combination with the rest of the limitations of the claim: partially etching the interlayer dielectric layer to form a contact holes exposing the contact pads; and forming a selective epitaxial silicon layer on the contact pads exposed through the contact holes to cover the insulating mask layer pattern.

Re claim 12, none of the prior art of record discloses the following limitations in combination with the rest of the limitations of the claim: partially etching the interlayer dielectric layer to form a contact hole exposing one of the at least two self-aligned contact pads; and forming a selective epitaxial silicon layer on the one of the at least two self-aligned contact pads to cover the insulating mask layer pattern.

Re claim 21, none of the prior art of record discloses the following limitations in combination with the rest of the limitations of the claim: partially etching the interlayer dielectric layer to form storage node contact holes having line shapes so that one first contact pad and an adjacent first contact pad arranged in a direction substantially parallel to the gate lines are exposed by each of the storage node contact holes; forming a selective epitaxial silicon layer on the first contact pads exposed by the storage node contact holes to cover the gate mask layer patterns; and forming storage node contact plugs in the storage node contact holes, wherein the storage node contact plugs are electrically connected to the first contact pads.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

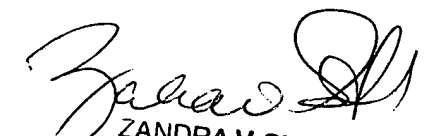
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Duong whose telephone number is (571) 272-1836. The examiner can normally be reached on 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571) 272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KBD



ZANDRA V. SMITH
SUPERVISORY PATENT EXAMINER
1/19/2006